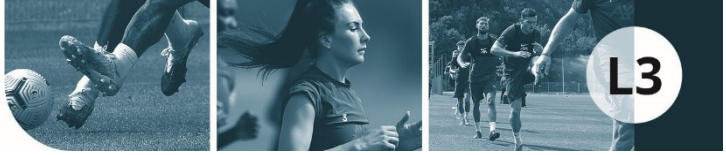
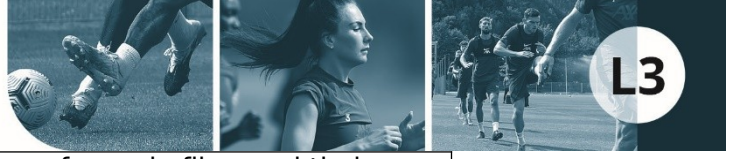


BTEC Assignment Brief

Qualification	Pearson BTEC International Level 3 Qualification in Sport
Unit number and title	**Unit 24: Applied Sports Anatomy and Physiology**
Learning aim	A Examine the function of the musculoskeletal system and how it responds to exercise
Assignment title	The Musculoskeletal system
Assessor	
Issue date	
Hand in deadline	

Vocational Scenario or Context	You are an assistant sports coach in a multi-sport club. Over the playing season the club experience a large volume of players who sustain injuries during competition. The club employ a part-time physiotherapist to provide a drop-in clinic twice a week for players to receive treatments. The club can't afford to provide anymore support for players so they would like to educate their coaches about how the musculoskeletal system responds to exercise in the hope that it will reduce injuries. The club would like you to produce a presentation that informs the clubs sports coaches about how the musculoskeletal system works and what can happen to it during exercise. This information will be presented to a small group of the coaches. They can then have the opportunity to ask you questions on the impact of the information for their sport.

Task 1	Create a presentation for the coaches that will evaluate the structure and function of the skeletal and muscular systems. You should discuss how these two systems produce effective movement for sport and exercise and include the effects of acute and long-term exercise. The coaches will need to explain within their presentation; • Where the main bones, joints and muscles are located • The function of the skeletal and muscular systems • The 3 different types of joint and the movement available at synovial joints. Explain how they are used in different types of exercise. • The 3 types of muscle and how the body priorities their use during different types of exercise. Give examples that link to exercise of different intensities.



- The different types of muscle fibre and their characteristics. This should be supported by relevant examples of when the fibres will be used in different sports.
- When the different muscle fibres will be used in the coach's sport and how the characteristics of the fibres allow them to work optimally at different intensities. The coaches need to understand how this applies to different positional requirements within a sport.
- Two practical examples of how the muscular and skeletal systems work together to produce specific movements in two different sports. Explain which bones, muscles and joints are involved, the movement produced, types of muscle contraction and the movement available at specific joints.
- Consider how the body will respond to acute exercise in the first 20 minutes.
- How the body responds to long-term exercise in an activity such as a six-week training programme. Begin by explaining the responses to long-term exercise and then discuss the significance of the changes in enabling a performer to work at different intensities. Finally, evaluate the benefits of the changes to elite performance.

Throughout the presentation you should use examples to ensure the coaches understand how the information is applied to their sport and their athletes.

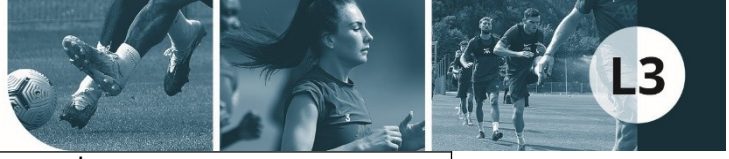
To conclude the presentation, you should analyse how the musculoskeletal system produces movement

You should also Analyse the effects of acute and long-term exercise on the musculoskeletal system.

You should evaluate how the functions of both the muscular and skeletal system combine to produce effective movement and evaluate the acute and long term effects of exercise on the muscular skeletal system.

Criteria covered by this task:

Unit/Criteria reference	To achieve the criteria, you must show that you are able to:
A.P1	Explain the structure and function of the skeletal system, including the different classifications of joints
A.P2	Explain the function of the muscular system and the different fibre types, identifying the location of the major muscles in the human body
A.P3	Explain the acute and long-term effects of exercise on the musculoskeletal system.
A.M1	Analyse how the musculoskeletal system produces movement and



	the effects of acute and long-term exercise.
A.D1	Evaluate how the functions of the musculoskeletal system produce effective movement and the effects of acute and long-term exercise.
Checklist of evidence required	Presentation Slides Verbal/visual recording of the presentation delivery
Other assessment materials attached to this brief	